REMARKS

I.   Introduction

The Current Action:

> Rejects claims 17–22 under 35 U.S.C. § 112, first paragraph;
>
> Rejects claims 10–16 and 17–26 under 35 U.S.C. § 112, second paragraph;
>
> Objects to the drawings;
>
> Rejects claims 17–22 and 24 under 35 U.S.C. § 102(b); and
>
> Rejects claims 1–16, 23, 26, and 27 under 35 U.S.C. § 103(a).

The Applicant respectfully asserts that each ground of objection or rejection is traversed by the following arguments. Therefore, the Applicant respectfully asks the Examiner to withdraw the objections and rejections of record and pass this application to issue. Claims 1–27 remain pending.

II.   The Rejection of Claims 17–22 Under 35 U.S.C. § 112, First Paragraph

The Current Action rejects claims 17–22 as failing to comply with the written description requirement of 35 U.S.C. § 112, first paragraph, because, in the Examiner's opinion, the claim term "at least one photo-sensor" has no support in the present application's disclosure. However, the Applicant respectfully reminds the Examiner that, as M.P.E.P. § 2163.02 makes clear, the subject matter of the claim need not be described literally. It need only allow persons of ordinary skill in the art to recognize and implement the applicant's invention. The Applicant respectfully points out that the specification fully discloses and describes a detector, that detector's functions, and the arrangement of that detector in the various disclosed embodiments. The Applicant respectfully submits that a "photo-sensor" is a detector, and that the knowledge needed to implement a "photo-sensor" as a detector is well within the capabilities of one of ordinary skill in the art. Thus, the "at least one photo-sensor" is fully supported in the specification, and the Applicant respectfully asks the Examiner to withdraw the rejection of claims 17–22.

III.   The Rejection of Claims 10–16 and Under 35 U.S.C. § 112, Second Paragraph

The Current Action rejects claims 10–16 as indefinite on two grounds. First, the Examiner opines that the terms "logic operable" and "optic [sic] arranged to combined [sic]" are relative terms for which the specification would not appraise one of ordinary skill in the art of the scope of the invention. Second, the Examiner opines that several terms in claims 17–26 do not contain the proper functions required under 35 U.S.C. § 112, sixth paragraph. The Applicant respectfully asserts that both the Current Actions contentions are incorrect.

First, the Applicant notes that the term "optic [sic] arranged to combined [sic]" does not appear in any claim of the present application. The Applicant assumes that the Examiner meant to reference the term "optics arranged to combine" which does appear, but in claim 11 not claim 10. Further, the Applicant respectfully submits that the actual claim limitations, when viewed in their entirety, are in no way unclear. The actual claim limitation of claim 11 is "optics arranged to combine said location beam and said control beam," and is, the Applicant submits, a detailed description of what is required by that portion of claim 11. "Optics" is a structural term well known to those of ordinary skill in the art, and the statement "arranged to combine said location bean and said control beam" fully describes what it is those "optics" are arranged to do. In addition, the specification fully describes and illustrates several example arrangements of optics utilized in the various embodiments of the present invention. As for the term "logic operable," the applicant respectfully asserts that the full limitation, namely "logic operable to determine at least one angle of position from an orientation of said redirector" is also a detailed description of what is required by that portion of claim 10. "Logic" is a structural term well known to those of ordinary skill in the art and "operable to determine at least one angle of position from an orientation of said redirector" fully describes what it is that logic is supposed to do. In addition, the specification fully describes and illustrates several detailed examples of specific "logic" arrangements utilized by the various embodiments of the present invention. The Applicant fully concedes that the limitations described above are broad, and that many arrangements of "optics" and "logic" may be used to meet the limitations. But the Applicant respectfully reminds the Examiner that breadth is not indefiniteness, and respectfully asserts that the specification provides a scope of enablement to one of ordinary skill in the art that is commensurate with the scope of

the claims – which is all that is required. *See* M.P.E.P § 2164.08. Therefore the Applicant respectfully asks the examiner to withdraw the rejections to claims 10–16.

As to the second contention, the Current Action makes the statement that "the word 'means' is preceded by the word(s) 'determining,' 'panning,' and 'interfrometrically [sic] analyzing' in an attempt to use a 'means' clause to recite a claim element as a means for performing a specified function." The Applicant respectfully points out, however, that in the claim limitations referred to by the "Current Action," the word "means" is not *preceded* by anything. Further, in each of these limitations, the word "means" is immediately followed by a specific of recited function. Specifically, in claim 17 the limitation is "means for *determining an angular coordinate of said object*," and in claim 24 the limitations are "means for *panning said second beam through at least one angular coordinate*" and "means for *interferometrically analyzing an interface pattern created by said first beam and said second beam*." In an effort to further prosecution, the Applicant has assumed that the essence of the Current Action's rejection is the mistaken belief that the limitations do not contain a recited function (rather that the apparent insistence that the recited function precede the word "means," a requirement that does not in fact exist). As the full recitations of the limitations plainly illustrate, however, each of the limitations contains the words "means for" and are immediately followed with a precise recitation of function. Since each of these limitations is in full compliance with 35 U.S.C. § 112, sixth paragraph, the Applicant respectfully asks the Examiner to withdraw the rejections of claims 17–26.

IV. The Objection to the Drawings

The Current Action objects to the figures as failing to show the "at least one photo-sensor." As described ins Section II above, a "photo-sensor" is a detector, as is well known by those of ordinary skill in the art. Furthermore, each of the Figures of the present application illustrates a detector. Thus the Applicant respectfully asks the Examiner to withdraw the objection to the figures.

V. The Rejections Under 35 U.S.C. § 102(b)

The Current Action has rejected claims 17–22 and 24 as anticipated by Hines, U.S. Patent No. 6,334,846 (hereinafter *Hines*). However, in order for a reference to be

anticipatory, M.P.E.P. § 2131 requires that reference teach each and every limitation of the rejected claims. The Applicant respectfully submits that *Hines* can not meet this requirement.

Claim 17 requires a "means for determining an angular coordinate of said object" and requires a "processor operable to analyze data received via said interface and generated by said at least one sensor to identify an interference pattern." The Applicant respectfully points out that the system of *Hines* does neither of these things. First, the Current Action points to beam splitter 49 of the *Hines* system as a "means for determining an angular coordinate of said object." The Applicant respectfully points out that a beam splitter alone is incapable of determining anything, and further points out that beam splitter 49 directs the light incident upon it in precisely the same manner regardless of the angular coordinate of object 110 in the *Hines* system. Thus, beam splitter 49 in no way aides the determination of an angular coordinate. Further, it does not appear that system of *Hines* ever determines the angular coordinate of object 110. Object 110 possess the ability to strobe certain wavelengths of light to indicate motion in certain directions. The system of *Hines* detects these strobes and uses them to determine how far, and in what direction, object 110 has moved. This is fundamentally different from the analysis performed by embodiments of the present invention, thus, *Hines* does not have a "processor operable to analyze data received via said interface and generated by said at least one sensor to identify an interference pattern" either. The Applicant does not concede that *Hines* teaches any of the limitations of the rejected claims, but because *Hines* fails to teach at least these limitations, the Applicant respectfully asks the Examiner to withdraw the rejection of claim 17.

Claims 18–23 depend from claim 17 and, therefore, inherit all of that claim's limitations. Although each of claims 18–23 recite limitations that make them patentable in their own right, each is at least patentable for depending from a patentable base claim. Therefore, the Applicant respectfully asks the Examiner to withdraw the rejection of claims 18–23 as well.

Claim 24 recites "a means of panning said second beam through at least one angular coordinate, wherein said second beam is reflected off of said object." The Current Action contends that this limitation is again met by beam splitter 49 and its operation on beam R of the *Hines* system. The Applicant points out however, beam splitter 49 merely reflects beam

R, which is not panned through any angular coordinate, and beam R is certainly not panned by splitter 49. Because *Hines* does not teach at least this limitation, the Applicant respectfully asks the Examiner to withdraw the rejection of claim 24.

VI.   The Rejections Under 35 U.S.C. § 103(a)

The Current Action rejects claims 1–16, 23, 26, and 27 as obvious in light of the combination of *Hines* and Mato, Jr. et al., U.S. Patent No. 6,008,798 (hereinafter "*Mato*"). However, the Applicant respectfully reminds the Examiner that he must first establish a *prima facie* case for rejecting claims as obvious, and that making a *prima facie* case requires three criteria. First, their must be some motivation to combine the references found within the references themselves, or in the knowledge available to one of ordinary skill in the art. Second, the combination must have had some reasonable likelihood of success. Third, the combination must teach or suggest each and every limitation of the rejected claims. Without conceding the second criteria, the Applicant respectfully asserts that there is no motivation to combine *Hines* and *Mato* as the Examiner suggests, and that, even when combined, the combination does not teach or suggest all the limitations in the rejected claims.

The Current Action states that "it would have been obvious . . . to learn the method of moving a search beam using a rotating mirror in the device of Hines as taught by Mato because it produces a beacon, i.e. search beam which sweeps over an area repeatedly in only one direction, instead of back and forth, making it somewhat less complex to later differentiate between the forward and backward sweeps." *See* Current Action at 5. However, this seems to indicate a fundamental misreading of *Hines*. As discussed above, *Hines* determines motion of object 110 through analysis of the strobes in certain wavelengths of reflected light. The beams of *Hines* are not swept or panned through an area, and no additional information or advantage is given to the *Hines* system by giving it the ability to do so. In fact, the analysis of *Hines* is so fundamentally different from that of *Mato* one would have to replace the entire system of *Hines* with the system of *Mato* to incorporate the features the Current Action proposes. Other than to interpret the Current Action to mean that, in the Examiner's opinion, the system of *Mato* is better than that of *Hines*, the Applicant can not understand what motivation exists to try to replace any aspect of *Hines* with portions of *Mato*.

Further, even when taken together, the references do not teach or suggest all of the limitations in the rejected claims. For example, claim 1 recites "determining at least one angle of position for said object by moving a search beam through a search area, wherein said search beam is reflected off said object creating a location beam when said search beam is at said at least one angle of position," and recites "determining a distance of said object from a reference point by analyzing an interference pattern created by combining said location beam and a control beam, wherein said distance and said at least one angle of position describes said position for use by said processor based system." Neither *Hines* nor *Mato* teach these limitations. The Current Action cites column 2 lines 50–59 as teaching this limitation, but this, again, appears to be a misreading of *Hines*. At this citation, *Hines* describes its system's ability to radiate light across a wide angle, then reduce that light to collimated pencil beam. It does not appear to discuss, in any way, determining an angle of position of object 110. Although not relied on to do so, *Mato* does not appear to teach this limitation either. The Current Action then cites lines 60–67 of column 2 as teaching "determining a distance of said object from a reference point by analyzing an interference pattern created by combining said location beam and a control beam." *See* Current Action at 5. At this citation, however, *Hines* discusses how the optics of object 110 are able to correct for and deal with incident light that is slightly off axis. It does not appear to discuss, in any way, determining a distance by analyzing an interference pattern. Although not relied on to do so, *Mato* does not appear to teach this limitation either. Therefore, even when taken together the references of *Hines* and *Mato* do not teach or suggest all of the limitations of claim 1.

Because no motivation exists to combine *Hines* and *Mato*, and even when combined the references do not teach or suggest all of the claim limitations, the Applicant respectfully asserts that the Current action fails to establish a *prima facie* case for rejecting claim 1, and asks the Examiner to withdraw the rejection.

Claim 10 recites "a redirector that moves in at least one dimension about a fixed point." The Current Action attempts to meet this limitation by combining the beam splitter 49 in *Hines* with the oscillating mirror in *Mato*. This attempted combination clearly illustrates the error in the Current Action's readings of these two references. Redirector 49 is fixed because the light incident upon it is fixed in its path. In fact, the very analysis made by *Hines* relies on the fixed positioning of redirector 49, as it sending beam R into an array of

fixed detectors. It is unclear how this redirector could be modified to move without altering the entire system. Further, claim 10 recites "logic operable to determine at least one angle of position from an orientation of said redirector" and "logic operable to determine a distance of said object from said fixed point." As noted above, redirector 49 does not move, so the Applicant does not understand how *Hines* can be said to teach "logic operable to determine at least one angle of position from an orientation of said redirector." Further, column 15 lines 35–45 cited by the Current Action as teaching both these limitations, discusses how *Hines* separates the returned beam into its constituent colors for separate detection by color. It in no way discusses determining an angular position, and in no way discusses "logic operable to determine a distance of said object from said fixed point." While not relied on to do so, *Mato* does not appear to teach these limitations either. Therefore, the Applicant respectfully asserts that the combination of *Hines* and *Mato* fail to establish a *prima facie* case for rejecting claim 10, and respectfully ask the Examiner to withdraw the rejection.

Claims 2–9 depend from claim 1, and claims 11–16 depend from claim 10. Each of claim 2–9 and 11–16 inherit all of the limitations of their respective base claim. Thus, in addition to the lack of motivation to combine, the Current Action fails to establish a *prima facie* case for rejecting claims 2–9 and 11–16 because the proposed combination does not teach or suggest all the limitations of claims 2–9 and 11–16. Therefore, the Applicant respectfully asks the Examiner to withdraw the rejection of claims 2–9 and 11–16 as well.

Claim 23 depends from claim 17, and, as demonstrated above, *Hines* fails to teach or suggest several limitations of claim 17. Although not relied on to do so, the Applicants respectfully assert that *Mato* does not appear to teach the omitted limitations either. Thus, in addition to the lack of motivation to combine, the Current Action fails to establish a *prima facie* case for rejecting claim 23 by failing to show that the proposed combination teaches or suggests all of its limitations. Therefore, the Applicant respectfully asks the Examiner to withdraw the rejection of claim 23 as well.

Claims 26 and 27 depend from claim 24 and, as demonstrated above, *Hines* fails to teach or suggest several limitations of claim 24. Although not relied on to do so, the Applicants respectfully assert that *Mato* does not appear to teach the omitted limitations either. Thus, in addition to the lack of motivation to combine, the Current Action fails to

establish a *prima facie* case for rejecting claim 26 and 27 by failing to show that the proposed combination teaches or suggests all of their limitations. Therefore, the Applicant respectfully asks the Examiner to withdraw the rejection of claims 26 and 27 as well.

VII. Conclusion

In view of the above, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this response. However, if a fee is due, please charge our Deposit Account No. 50-3718, under Order No. 10030175-1 from which the undersigned is authorized to draw.

I hereby certify that this correspondence is being deposited with the U.S. Postal Service as Express Mail, Airbill No. EV568258159US, in an envelope addressed to: MS Amendment, Commissioner for Patents, PO Box 1450, Alexandria, VA 22313-1450, on the date shown below.

Date of Deposit: 05-08-2006

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